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Report Highlights: In MY 2003, the United States maintained the position of major supplier of grass and forage seeds in the Korean market with market share increased to 57 percent from 54 percent in the previous year (on a quantity basis) due to larger imports of U.S. rye seed. However, Korean buyer rejected a third of the U.S. rye seed sold to Korea in 2004 because of claims that the shipments did not meet contract requirements.

Includes PSD Changes: No
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SECTION I. SITUATION AND OUTLOOK

Local production of grass and forage seed remains negligible. The Korean government seed production policy remains unchanged with developmental assistance still targeted for five types of seed: rice, barley, soybean, corn and potato. In CY 2004, The National Seed Management Office (NSMO) distributed the following types and quantities of seed: rice – 17,000 MT, barley 1,900 MT, soybean – 1,050 MT, corn - 127 MT, and potato - 9,215 MT. Local corn seed for forage production declined to 22 MT.

In CY 2003, production of vegetable seed from both local and overseas fields decreased by 36.4 percent and 7.1 percent from the previous year, respectively. Private Korean seed companies produced 74 percent of their total seed output on foreign farms. However, all seed from foreign production which private Korean producers brought back is counted as imports.

In MY 2003, Korean planting seed imports increased to 14,062 MT, up 6 percent from the previous year reflecting an increase in rye seed imports. Thanks to the increase in quantity, the value of planting seed imports also increased to US\$ 44 million, up 11 percent from MY 2002. The Korean government has encouraged farmers to cultivate forage for feed or fertilizer in rice fields to reduce rice production under the "Green Manure Plan" campaign since 2002. Farmers have received a 100 percent subsidy for the cost of planting seed under the Green Manure Plan. Planting seed imports of forages are expected to increase in MY 2004 to meet the greater demand generated by the government campaign.

However, 30 percent of the total exports of 3,200 MT of U.S. rye seed exported to Korea in CY 2004 were rejected by buyers on the grounds that it failed to meet contract specifications for absence of fungal contamination (*Bipolaris specifera*) and/or minimum germination rates of 80 percent when tested at the discharging port. Therefore, about 904 MT of U.S. rye seed has been rejected and shipped back to the United States.

The United States maintained the position of the major supplier of grass and forage seeds in the Korean market. In MY 2003, U.S. market share in Korea increased to 57 percent from 54 percent in the previous year (on a quantity basis) due to large imports of U.S. rye seed. The U.S. presence in the Korean seed market is strengthened by its broad array of seeds, such as: corn, rye, Lucerne seed, clover seed, ryegrass, timothy grass, fescue seed, Kentucky bluegrass, orchard grass, Sudan grass and lawn seed.

Trade data for the first three months of MY 2004 indicate that the United States will continue to be a major supplier of grass, forage and lawn seed in Korean planting seed market in MY 2004. As the government's "Green Manure Plan" campaign for 2002-2005 is expected to continue after 2005, the import of rye seed from the United States and Canada is expected to continue to increase in future.

Competition from international seed suppliers originates from Australia for oat and Sudan grass; from Japan for vegetable seed; and from Canada for rye seed, oat, fescue and lawn seed. China competes on the Korean market with Chinese Milk Vetch (within the category of other grasses), herbaceous plants, seed of fruit trees, vegetable seed and flowers.

Since Korea has joined the International Union for the Protection of New Varieties of Plants (UPOV) with intellectual property rights (IPR) protection on 113 seed varieties as of January 7, 2002, the government has a biennial plan to add 41 new varieties into the IPR protection lists in CY 2004, 31 new varieties in 2006 and 24 new varieties in CY 2008. The list of 2004 new varieties is scheduled to announce in early December 2004.

The Ministry of Agriculture's Rural Development Administration (RDA) is conducting biotech research on development of transgenic crops. The National Institute of Agricultural Biotechnology (NIAB) under the RDA is developing eighteen biotech-enhanced agricultural commodities with 45 varieties. Included are rice, chili (red pepper), potato, Chinese cabbage, cabbage, Perilla seed, tomato, apple, watermelon, cucumber, chrysanthemum, swine, chicken, etc. NIAB has been doing field trials of herbicide resistant rice and virus resistant potatoes for years and is planning to commercialize those crops in the next four or five years. The institute is also developing testing methods for GMO detection and conducting risk assessment of GMO crops for environmental release on a voluntary basis. NIAB will continue to conduct mandatory environmental risk assessments of biotech crops when the Act on Transboundary Movement, Etc., of Living Modified Organisms (LMO Act), the enforcement legislation of the Bio-safety Protocol, goes into effect.

SECTION II: STATISTICAL TABLES

Korea - Supply of Planting Seeds for Grass and Forage (Metric Tons, Calendar year basis)						
Calendar Year	Grass		Forage			Grand Total
	Import	Sub. Total	Domestic Production 1/	Import	Sub. Total	
1991	185	185	294	2,949	3,243	3,428
1992	245	245	213	3,276	3,488	3,733
1993	286	286	169	3,696	3,865	4,151
1994	261	261	161	4,131	4,292	4,553
1995	212	212	64	3,835	3,899	4,111
1996	210	210	49	4,078	4,127	4,337
1997	190	190	73	4,215	4,288	4,478
1998	173	173	179	4,257	4,436	4,609
1999	102	102	90	3,779	3,869	3,971
2000	68	68	46	3,062	3,108	3,176
2001	51	51	28	2,944	2,972	3,023
2002	48	48	25	2,730	2,755	2,803
2003	42	42	20	2,451	2,471	2,513
2004	38	38	22	2,397	2,419	2,457

1/ Domestic forage seeds are mainly composed of corn and rye through 1994. Since 1995, the Korean government stopped supplying rye seed.

Source: The National Agricultural Cooperative Federation (NACF)

Korea – 2004 Supply of Forage and Grass Seed (Kg, Calendar Year Basis)			
Commodity	Spring Planting	Fall Planting	Total
Orchard grass	6,480	12,440	18,920
Tall fescue	2,620	5,220	7,840
Timothy	540	1,400	1,940
Kentucky bluegrass	880	2,220	3,100
Perennial Rye grass	-	2,400	2,400
Reed canary grass	40	420	460
Alfalfa	700	840	1,540
White Clover	160	960	1,120
Red Clover	220	520	740
Grass Seed Total	11,640	26,420	38,060
Forage Rape	1,630	-	1,630
Forage Oat	95,560	199,160	294,720
Winter Rye	-	1,541,620	1,541,620
Italian Ryegrass	6,840	78,420	85,260
Sudan grass F1	262,520	-	262,520
Sorghum F1	8,080	-	8,080
Corn	203,140	-	203,140
Forage Seed Total	577,770	1,819,200	2,396,670
Total Imported Seed	589,410	1,845,620	2,435,030
Domestic Corn	22,000	-	22,000
Grand Total	623,050	1,845,620	2,457,030

Source: National Agricultural Cooperatives Federation (NACF)

Korea – 2003 Supply of Forage and Grass Seed (Kg, Calendar Year Basis)			
Commodity	Spring Planting	Fall Planting	Total
Orchard grass	6,720	12,960	19,680
Tall fescue	2,540	6,720	9,260
Timothy	1,060	1,480	2,540
Kentucky bluegrass	800	2,120	2,920
Perennial Rye grass	560	3,320	3,880
Reed canary grass	240	500	740
Alfalfa	920	1,320	2,240
White Clover	180	700	880
Red Clover	220	580	800
Grass Seed Total	13,240	29,700	42,940
Forage Rape	1,600	6,290	7,890
Forage Oat	78,140	293,600	371,740
Winter Rye	-	1,535,160	1,535,160
Italian Ryegrass	13,180	79,090	92,270
Sudan grass F1	208,800	-	208,800
Sorghum F1	4,800	-	4,800
Corn	230,160	-	230,160
Forage Seed Total	536,680	1,914,140	2,450,820
Total Imported Seed	549,920	1,943,840	2,493,760
Domestic Corn	20,000	-	20,000
Grand Total	569,920	1,943,840	2,513,760

Source: National Agricultural Cooperatives Federation (NACF)

Korea: Planting Seed Production of Food Grain					
Commodity	2000	2001	2002	2003	2004 a/
Rice	15,986	14,883	15,160	16,000	17,000
Barley	2,250	2,403	2,120	1,974	1,918
Soybean	717	848	857	965	1,050
Corn	192	68	114	105	127
Potato	9,229	8,921	8,975	7,889	9,215
Total	28,374	27,123	27,226	26,933	29,310

a/ MAF's Plan

Source: Ministry of Agriculture and Forestry (MAF)

KOREA: MY2003/2004(July/June) Planting Seed Imports (Unit: KG,US\$1,000 based on CIF)				
COMMODITY	FROM WORLD		FROM THE U.S.	
	VOLUME	VALUE	VOLUME	VALUE
	KG	US\$1,000	KG	US\$1,000
CORN	234,990	1,647	234,990	1,647
RYE	6,538,880	4,146	3,799,980	2,333
OATS	557,160	326	20,000	12
LUCERNE SEEDS	22,287	61	12,336	38
CLOVER SEED	12,561	43	12,567	43
FESCUE SEED	810,312	1,131	801,029	1,119
KENTUCKY BLUEGRASS	241,762	901	241,762	901
RYEGRASS	701,275	1,172	627,580	1,040
TIMOTHY GRASS	5,527	15	5,527	15
SUDANGRASS	761,507	1,267	568,087	936
ORCHARDGRASS	111,232	214	88,792	168
OTHERGRASS	1,389,508	1,654	630,715	720
LAWN SEED	923,467	1,970	811,475	1,696
SUB. TOTAL	12,310,468	14,547	7,854,840	10,668
VEGETABLE SEEDS	1,515,928	27,048	106,850	1,101
HERBACEOUS PLANTS	45,954	2,458	4,855	863
SEEDS OF OTHER FOREST TREE	56,043	269	12,462	43
SEED OF FRUIT TREE	74,646	95	41	6
OTHER	59,061	305	33,657	153
SUB. TOTAL	235,704	3,127	51,015	1,065
TOTAL	14,062,100	44,722	8,012,705	12,834

KOREA: MY2002/2003(July/June) Planting Seed Imports (Unit: KG,US\$1,000 based on CIF)				
COMMODITY	FROM WORLD		FROM THE U.S.	
	VOLUME	VALUE	VOLUME	VALUE
	KG	US\$1,000	KG	US\$1,000
CORN	284,818	1,965	284,818	1,965
RYE	5,920,260	2,989	4,108,680	2,064
OATS	546,870	235	111,160	58
LUCERNE SEEDS	14,207	40	10,325	32
CLOVER SEED	15,674	48	15,674	48
FESCUE SEED	513,272	679	513,272	679
KENTUCKY BLUEGRASS	157,070	520	157,070	520
RYEGRASS	499,270	650	461,990	594
TIMOTHY GRASS	8,475	15	6,215	11
SUDANGRASS	528,909	814	392,309	674
ORCHARDGRASS	88,716	164	52,896	98
OTHERGRASS	1,383,889	2,566	28,578	110
LAWN SEED	665,657	1,147	643,717	1,009
SUB. TOTAL	10,627,087	11,832	6,786,704	7,862
VEGETABLE SEEDS	2,061,490	24,872	175,414	1,358
HERBACEOUS PLANTS	55,318	1,853	13,670	436
SEEDS OF OTHER FOREST TREE	56,043	269	12,462	43
SEED OF FRUIT TREE	134,514	115	153	22
OTHER	303,015	1,473	94,287	227
SUB. TOTAL	548,890	3,710	120,572	728
TOTAL	13,237,467	40,414	7,082,690	9,948

Source: Korea Customs Service

KOREA: MY2003/2004(July/June) Planting Seed Exports (Unit: KG,US\$1,000 based on FOB)				
COMMODITY	TO WORLD		TO THE U.S.	
	VOLUME	VALUE	VOLUME	VALUE
HERBACEOUS PLANTS	2,737	62	59	12
VEGETABLE SEED	303,095	14,546	16,438	1,694
SEED OF FRUIT TREE	80	15	70	14
SEED OF OTHER FOREST TREE	2,258	61	0	0
OTHER	52,619	656	0	0
TOTAL	360,789	15,340	16,567	1,720

KOREA: MY2002/2003(July/June) Planting Seed Exports (Unit: KG,US\$1,000 based on FOB)				
COMMODITY	TO WORLD		TO THE U.S.	
	VOLUME	VALUE	VOLUME	VALUE
HERBACEOUS PLANTS	377	22	300	10
VEGETABLE SEED	423,804	15,594	25,329	1,689
SEED OF FRUIT TREE	12	89	0	0
SEED OF OTHER FOREST TREE	21,175	198	62	4
LAWN SEED	450	4	60	1
OTHER	77,353	593	137	15
TOTAL	523,171	16,500	25,888	1,719

Source: Korea Customs Service

Korea: Vegetable Seed Production (Kg, Calendar Year)						
Commodity	CY2002			CY2003		
	Total	Local Production	Overseas Production 1/	Total	Local Production	Overseas Production 1/
White Radish	870,309	397,728	472,581	683,356	215,764	467,592
Chinese Cabbage	175,368	158,849	16,519	131,545	102,784	28,761
Cabbage	71,800	10,730	61,070	64,780	6,062	58,718
Onion	79,984	12,123	67,771	45,514	11,527	33,987
Welsh Onion	150,788	3,975	146,814	102,416	3,683	98,733
Carrot	91,910	590	91,320	65,475	560	64,915
Lettuce	34,494	1,520	32,974	25,439	1,694	23,745
Spinach	136,155	1,576	134,597	121,324	650	120,674
Red Pepper	40,514	4,089	36,425	56,038	2,866	53,172
Tomato	835	22	813	2,424	11	2,413
Melon	1,321	1,093	228	2,050	650	1,400
Cucumber	7,431	1,362	6,069	9,504	864	8,640
Water Melon	13,090	2,642	10,448	24,970	1,765	23,205
Squash	11,871	3,030	8,841	24,672	1,368	23,304
Total	1,637,185	550,733	1,086,452	1,359,505	350,246	1,009,259

1/ Korea Seed Association includes overseas production in total vegetable seed production in Korea because local seed companies cultivated the seed abroad and then imported it into Korea.

Source: Korean Seed Association

Korea: Vegetable Seed Imports (Kg, Calendar Year)						
Commodity	CY2002			CY2003		
	Total Imports	Pure Imports	Overseas Production 1/	Total Imports	Pure Imports	Overseas Production 1/
White Radish	579,148	106,567	472,581	634,661	166,709	467,592
Chinese Cabbage	16,573	54	16,519	28,762	1	28,761
Cabbage	61,338	268	61,070	59,004	286	58,718
Onion	74,557	6,786	67,771	39,385	5,398	33,987
Welsh Onion	155,698	8,885	146,814	105,260	6,527	98,733
Carrot	108,347	17,027	91,320	71,346	6,431	64,915
Lettuce	33,298	324	32,974	24,387	642	23,745
Spinach	298,883	164,304	134,597	199,275	78,601	120,674
Red Pepper	36,293	0	36,425	53,226	54	53,172
Tomato	912	98	813	2,477	64	2,413
Melon	228	0	228	1,400	0	1,400
Cucumber	6,510	441	6,069	8,654	14	8,640
Water Melon	10,448	0	10,448	23,205	0	23,205
Squash	10,037	1,196	8,841	24,244	940	23,304
Total	1,392,463	306,011	1,086,452	1,274,926	265,667	1,009,259

Source: Korean Seed Association

Korea – CY 2004 List of National Recommended Cultivars of Grass and Forage Crops ((As of end April 2004))	
GRASSES	
Orchard grass	Potomac, Frode, Frontier, Ambassador, Hallmark, Summer Green, Amba, Warrior, 93E.
Tall Fescue	Fawn, Alta, Festorina, Felopa, AU-Triumph, Cajun, Montebello.
Timothy	Climax, Clair, OdenWalder, Hokuo, Kunpu, Liphlea.
Perennialryegrass	Norlea, Taptoe, Reveille, Bastion, Ellett, Bison, Tetrelite, Friend.
Kentucky Bluegrass	Kenblue, Monopoly
Red Top	Streaker
Reed Canary Grass	Frontier, Venture, Vantage.
Meadow Fescue	Joma
Bromgrass	Regar
LEGUMES	
Alfalfa	Pacer, Scout, Team, Luna, Vernal, 5444, Drummor, Kitawakaba
White Clover	California Ladino, Regal.
Red Clover	Kenland, Titus, Atlas, TR2000.
Birdsfoottrefoil	Empire, Viking.
FORAGE CROPS	
Corn	P3394, P3156, P3163, P3489, P3223, P3310, P3313, P3130, P36H36, P32P75, P32J55, P33F18, P33J56, P32G94, 32K26, 31A12, 32R42, 32K61, 31G20, DK689, DK729, DK713, DK501, DK720S, DK537, DK754S, DK697, DKC61-24, G4743, G4624, GL499, G4655, NC5514, NC7177, NC4880, NC6440, GW6959, <u>GW737</u> , GW5018, Garst8342, Garst8396IT, Garst8285, Garst New 8640, N73-Q3, EXP874, PP3303.
Sorghum-Sudan grass Hybrid	P855F, P877F, Jumbo, TE-Haygrazer, Sordan 79, GW9110G, GW104G, GW9161F, NC+855, SX-17, Speed Feed, G-7, Turbo 9, Turbo10, TE-Evergreen, Betta Grazer, AG2501, Dairyman's Dream, PAC F 8350, Cow Pow.
Sorghum-Sorghum Hybrid	NK-367, SS405, KF429, Mega Sweet.
Rye	Homil22, Koolgrazer, Elbon, Vita-graze, Bonel, Athens Abruzzi, Maton, Wrens abruzzo, Wintermore, Danko, Wintergrazer 70, Luchs, Olkon, Bates, Humbolt, MAC Blue, Barr Grazer, Barr Grain Master, GI85Ryegraser, GI87Ryegraser, Lovaszdatonai, Wintergreen, Jlee Select, 9909 Green Power .
Oats	Cayuse, Magum, Foothill, West(Speed Oat) , Murray, Swan, Ensiler, Yilgarn, Palinup, Cashel, Irwin, Dane,Troy, A.C. Juniper, Hayabusa, Enterprise, Nugene .
Forage Rape	Akela, Velox, Ramon, Sparta, Barnapoli, Ember .
Italian rye grass	Dalita, Tetrone, Barmultra, Tetraflorum, Gordo, Sikem, Bartissimo, Wilo, Combata, Tosca, Florida 80, Tachiwase, Marshall, Grazer, TAM90, Typhoon, Ribeye.

Note: Entries in boldface are new.

Source: National Agricultural Cooperative Federation (NACF)

Korea - Applied Tariff Schedule for Planting Seeds (Percent)							
Commodity H.S. Code		2003			2004		
		General rate	In- Quota rate	Out-of- quota rate	General rate	In-Quota rate	Out-of- quota rate
Peas	0713.10.1000	27.9	na	na	27	na	na
Beans	0713.31.1000	30	30	614.3	30	30	607.5
Red Beans	0713.32.1000	30	30	425.5	30	30	420.8
Kidney Beans	0713.33.1000	27.9	na	na	27	na	na
Wheat	1001.90.9010	1.92	na	na	1.8	na	na
Rye 1/	1002.00.1000	3(0)	3	109.9	3(0)	3	108.7
Oats 1/	1004.00.1000	3(0)	3	561	3(0)	3	561
Forage Corn 2/	1005.10.0000	0	0	331.7	0	0	328
Sweet Corn 2/	0712.90.2091	0	0	374.1	0	0	370
Sorghum 1/	1007.00.0000	3(0)	3	788.1	3(0)	3	779.4
Millet 1/	1008.20.1010	3(0)	3	18.2	3(0)	3	18
All Seed	1209.xx.xxxx	0	na	na	0	na	na

1/ Number in parentheses is a temporary duty. Commodity imported under the reduced tariff policy. CMA annual quota through 2004 for the respective commodity is as follows: Rye - 1,327.3 MT, Oats - 597.3 MT, Sorghum - 13.7 MT, and Millet - 0.4 MT.

2/ Corn seed for forage and sweet corn is imported at free tariff rate for 247 MT of CMA quota.

Source: Korea Customs Research Institute, Tariff Schedules of Korea